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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,897	03/30/2004	Sung Hea Cho	1594.1340	1333

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EXAMINER
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TRIEU, THERESA

ART UNIT	PAPER NUMBER
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3748

DATE MAILED: 02/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/811,897

Applicant(s)

CHO ET AL.

Examiner

Theresa Trieu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on March 30, 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date March 30, 2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Priority*

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 4, 5, 6, 7, 13, 16, 19 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 and 16 are indefinite and functional because insufficient structure or structural relationships are recited to support the statements that a rotating shaft to rotate in a forward/clockwise and a reverse/counter -clockwise direction to vary compression capacity of the compressor. Claims 1, 6 and 16, the phrase “a shaft bearing” renders the claim indefinite because it is unclear whether applicants are claiming “*upper shaft bearing (35a)*” or “*lower shaft bearing (35b)*”. Claims 4, 5, 7, 13, 19 and 20, the phrase “an *oil supply hole*” renders the claim indefinite because it is unclear whether applicants are claiming “*upper oil supply hole (92)*” or “*lower oil supply hole (93)*”

Claim 7 recites the limitation "the oil guide unit" in line 1. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 6-9, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Takebayashi (Publication Number JP 62-271987).

Regarding claims 6-9, 14 and 15, as shown in Fig. 1, Takebayashi discloses a rotary compressor, comprising: a rotating shaft (5); a upper shaft bearing (7) which supports the rotating shaft; an oil guide (36, 37, 40) provided on the rotating shaft to supply oil to frictional contact parts of the rotating shaft; and an oil storing chamber (39) at an upper portion of the shaft bearing to store a predetermined amount of oil fed through the oil guide therein; the oil guide unit comprises: an oil passage (36, 37) axially extending from a lower end to a predetermined position of the rotating shaft; an oil pickup member (35) provided in the lower portion of the oil passage to feed the oil to the oil passage; an oil supply hole (38) formed on the rotating shaft to allow the oil passage to communicate with an outer surface of the rotating shaft via the oil supply hole; and an oil guide groove spirally (40, 42) formed on at least one of an inner surface of the shaft bearing (7) and the outer surface of the rotating shaft; the oil storing chamber (39) having a larger inner diameter than an outer diameter of the rotating shaft (5) to store the oil therein, the oil storing chamber being shaped like a ring and being mounted at a lower portion of the upper portion of the shaft bearing; the oil storing chamber (39) comprising an inner diameter part which is formed on the upper portion of the shaft bearing (7) to have an increased inner

diameter; an inner diameter of the oil storing chamber (39) being larger than an outer diameter of the rotating shaft to thereby store the oil therein.

Note that in claim 6, a preamble to a claim is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self contained description of the structure not depending for completeness upon the introductory clause, clearly the claims of record do not reply on the introductory clause for completeness. See *Kropa v. Robie*, *supra* at 480. See also *Ex parte Mott*, 190 USPQ 311, 313 (PTO Bd. of App. 1975).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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3. Claims 1-3, 10-12, 16-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takebayashi (Publication Number JP 62-271987) in view of Cho et al. (Cho) (Patent Number 6,860,724).

Regarding claims 1 and 16, as shown in Fig. 1, Takebayashi discloses a rotary compressor comprising: a rotating shaft (5); a shaft bearing (7) which supports the rotating shaft; an oil guide groove (40, 42) which is spirally formed on at least one of the shaft bearing and the rotating shaft to supply oil; and an oil storing chamber (39) at an upper portion of the shaft bearing to communicate with the oil guide groove, and to store a predetermined amount of oil therein. However, Takebayashi fails to disclose a reverse rotary compressor.

Cho teaches that it is conventional in the art to utilize a variable capacity rotary compressor by using the selective the direction of rotation of the rotating shaft driving the rotating pistons. It is examiner's position that one having ordinary skill in the rotary compressor art, would have found it obvious to have a variable capacity rotary compressor as claim, since it is merely design parameters, depending on being used for a particular purpose or solving a stated problem. Moreover, there is nothing in the record which establishes that the claimed variable capacity rotary compressor, presents a novel of unexpected result (See *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975)).

Regarding claims 2, 3, 10-12, 17, 18 and 20, Takebayashi further discloses the oil storing chamber (39) has a larger inner diameter than an outer diameter of the rotating shaft (5) to store the oil therein, the oil storing chamber (39) being shaped like a ring and being mounted at a lower portion of the upper portion of the shaft bearing; the oil storing chamber (39) comprising an inner diameter part which is formed on the upper portion of the shaft bearing (7) to have an

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increased inner diameter; a lower portion of the upper portion of the shaft bearing (7), wherein the oil storing chamber (39) comprises a ring which is mounted at the lower portion of the upper portion of the shaft bearing; the oil supply hole (38) being formed at a position corresponding to the ends of the oil guide groove (40, 42) and the oil storing chamber (39).

***Allowable Subject Matter***

4. Claims 4, 5, 13 and 19 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Prior Art***

The IDS (PTO-1449) filed on March 30, 2004 has been considered. An initialized copy is attached hereto.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of four patents: Connor (U.S. Patent Number 3,311,292), Fujiwara et al. (U.S. Patent Number 4,472,114), Tagawa et al. (Publication Number JP 60-030495), and Kaneuchi et al. (Publication Number JP 61-155688), each further discloses a state of the art.

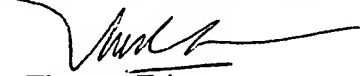
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Theresa Trieu whose telephone number is 571-272-4868. The examiner can normally be reached on Monday-Friday 8:30am- 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on 571-272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TT  
February 2, 2006

  
Theresa Trieu  
Primary Examiner  
Art Unit 3748